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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,614	08/05/2005	Joerg Issberner	262338US0PCT	8527

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EXAMINER	
BERNSHTEYN, MICHAEL	
ART UNIT	**PAPER NUMBER**
1713	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/517,614	ISSBERNER ET AL.	
	Examiner	Art Unit	
	Michael Bernshteyn	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action follows a response files on June 19, 2006. Applicants have amended claims 1-23 and a new claim 24 has been added.

2. Applicant's arguments, see remarks, filed June 19, 2006, with respect to the rejection(s) of claim(s) 1-3 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Krutko et al. (SU 1435580 A).

3. Claims 1-24 are pending.

Claim Rejections - 35 USC § 102

4. The test of this section of Title 35 U. S. C. not included in this action can be found in a prior Office Action.

Claim Rejections - 35 USC § 103

5. The test of this section of Title 35 U. S. C. not included in this action can be found in a prior Office Action.

6. Claims 1-12 and 14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Krutko et al. (SU 1435580 A).

With regard to the limitations of claims 1-4 and 7-10, Krutko discloses the process of heating methacrylic acid and terpenes in weight ration 3-4:1 in the presence of the final production product in the amount of 0.01-0.05wt.%, as well as sulphuric acid

and water. The reagent are mixed in the following sequence: methacrylic acid, terpene hydrocarbon, sulphuric acid and an additional solution of the final product.Methacrylic acid purified by distillation in vacuum is used as the reactant. The terpenes are the following: α-pinene, β-pinene and δ3-carene, which are obtained by rectification of turpentine and purified by the distillation prior to use in the reaction (abstract).

Krutko discloses that the final copolymer is colorless and free of darkness, which is according "The Random House College Dictionary", page 250 (contains the description of the word "clear") equivalent to the word "clear". Additionally, this copolymer is water-soluble (col. 1, line 43).

Therefore, all the limitations of claim 1 and dependable claims 2-4 and 7-10 are expressly met by Krutko.

With regard to the limitations of claims 5-6 and 11-12, Krutko does not disclose the proportion of neutralization of the acid groups in the monomer and a weight-average molecular weight of the copolymer.

In the absence of criticality in the specification of maintaining the definite level of the neutralization of the acid groups in the monomer and a weight-average molecular weight of the copolymer, it is the examiner position to believe that copolymer obtained by exactly the same polymerized monomers in the aqueous phase and being colorless and water-soluble (SU'580, col. 1, lines 16-43, Table 2) would be substantially identical to the instant claimed clear, water-soluble copolymers.

With regard to the limitations of claim 14, Krutko discloses that copolymer is obtained by the method of polymerization in the aqueous phase and the concentration

of the copolymerizable constituents in the aqueous polymerization mixture is within the claimed range (Table 1, Examples 7-16).

7. Claims 13, 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krutko et al. in view of Werres et al. (WO 95/15296).

With regard to the limitations of claims 13, 15 and 16, Krutko does not disclose that the copolymer is obtained by the method of radical polymerization in the aqueous phase, wherein the component b) is used in the form of an oil-in-water emulsion.

With regard to the limitations of claims 17-21, Krutko does not disclose that the copolymer can be used in a water-conveying system in the effective amount.

Werres discloses the use of **oil-in-water emulsion** to prevent slime formation and inhibit the proliferation of microbes in water carrying system. The emulsion contains at least one of the following active substances as a component of the oil-phase: 1) a saturated or unsaturated, open-chain or cyclic, normal or isomeric hydrocarbon; 2) a saturated or unsaturated fatty alcohol, a saturated or unsaturated fatty acid, a fatty acid monoalkyl ester, etc.; 3) a mono- or polyester of a saturated or unsaturated fatty acid and/or polyalcohols except polyethylene alcohol; 4) a polyamide of saturated or unsaturated fatty acids; 5) an acyclic, preferably monocyclic and/or bicyclic terpene, such as a **terpene hydrocarbon** and/or terpene alcohol; and/or 6) a polyalkyl compound based on alkylene oxide and fatty alcohols, fatty acids and/or fatty acid glycerides of fatty acids. The proportion of oil phase in these emulsions is between 1 and 90 wt.%. The emulsions are used in concentrations of **1 to 200 ppm** (abstract).

Both references are analogous art because they are from the same field of endeavor concerning new water-soluble terpene copolymers.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of radical polymerization using an oil-water emulsion as taught by Werres in the process of polymerization of Krutko's terpene copolymer in order to prevent slime formation and inhibit the proliferation of microbes in water carrying system (WO'296, abstract), and thus to arrive at the subject matter of instant claim 13 and dependable claims 15-24.

8. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krutko et al. in view of Behr et al. (U. S. Patent 5,756,624).

With regard to the limitations of claims 22-24, Krutko does not disclose that the copolymer can be used in a water-conveying system in the effective amount for grinding and dispersing of pigments, for textile- and leather-treatment and as cleaning agent.

Krutko discloses that the copolymers of methacrylic acid and terpenes are used as surface-active dispersing agents, coagulants and flocculants, soil structure formers and thickeners, and for the production of membranes, ionites, etc. (abstract)

Behr discloses that the copolymers may be used as tackifiers in adhesives, in paints and as binders for printing inks, **textile sizing agents**, builders and hardeners. Copolymers with esters to which a relatively long-chain alcohol radical is attached are suitable for hydrophobicization, for example for **hydrophobicizing shoe** and clothing **leather** (col. 3, lines 17-23).

Both references are analogous art because they are from the same field of endeavor concerning new water-soluble terpene copolymers.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Krutko's terpene copolymer for textile- and leather-treatment and as cleaning agent as taught by Behr with reasonable expectation of success.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Patent Examiner
Art Unit 1713

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08/31/2006

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